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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/786,759 | 02/24/2004 | Amir Abolfathi | AT-000220 | 2843 |

7590 01/10/2006

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| EXAMINER |
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BUMGARNER, MELBA N

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| ART UNIT | PAPER NUMBER |
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3732

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/786,759 | Applicant(s) ABOLFATHI ET AL. | |
| | Examiner Melba Bumgarner | Art Unit 3732 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 22-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 22-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 22 is objected to because of the following informalities: “the arch expanded” should read –the arch expander--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-8 and 22-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not describe the step of “providing an electronically viewable treatment plan by an appliance provider based on the at least one digital scan, the treatment plan including the use of a custom fit palatal arch expander” and accordingly the steps utilizing the plan.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-3, 6-8, and 22-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Truax et al. in view of Pavloskaia et al. (6,463,344). Truax et al. disclose a method for making an arch expander 38 comprising acquiring a digital scan representing the mouth of the patient (column 5 line 44), fabricating a first portion 58 having a plurality of cavities for receiving posterior teeth on one side and a palatal portion and a second portion 60 having a plurality of cavities for receiving posterior teeth on an opposite side and a palatal portion 60, coupling an expansion member 48, each of the plurality of cavities configured to fit over the posterior teeth (figure 6). Truax et al. does not show limitations that are considered new matter in the amended claims as noted above. However, it is noted that Pavloskaia et al. teach a method for fabricating dental appliances comprising visualization and communication of dental treatment plan and appliance. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Truax et al. to include the steps of Pavloskaia et al. in order to enhance the treatment of a patient by simplifying and improving treatment plans as well as saving money and time as taught by Pavloskaia et al. The method of Truax et al. comprises adjusting the expansion member to vary the spacing 50 between the portions, the expansion member comprises one or more screws 52, and the scan comprises intra-oral scanning. Truax et al. show placing the arch expander in the patient's mouth. Pavloskaia et al. show the appliance fabricated using stereolithography (column 12 line 24), and acquiring the scan comprising taking an impression of the patient's teeth, placing the impression in a scanner and generating a 3-D model (column 4 line 36). Pavloskaia et al. further show the steps of reviewing, approving or editing the treatment plan, viewing 3-D model, showing movement of teeth, and compressing data.

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6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Truax et al. in view of Pavloskaia et al. and further in view of Williams. The modified method of Truax et al. and Pavloskaia et al. discloses the limitations as described above; however, they do not show expansion member comprising springs. Williams teaches a dental appliance having an expansion member comprising one or more springs 138. It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the expansion member of Truax et al. with the spring of Williams as Truax et al. shows that a variety of expansion joints or other adjustment mechanisms may be incorporated into the dental appliance (column 7 line 63). Furthermore, the specification also states that the expander may be a screw, spring, or any adjustable device that increases or decreases the separation of the portion.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Truax et al. in view of Pavloskaia et al. and further in view of Tepper. The modified method of Truax et al. and Pavloskaia et al. discloses the limitations as described above; however, they do not show the first and second portions comprising nitinol. Tepper teaches a dental appliance having expander portions comprising nitinol (column 6 line 17). It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the portions of Truax et al. with the nitinol of Tepper as Truax et al. shows that a variety of expanders or other adjustment mechanisms may be incorporated into the dental appliance (column 7 line 63). Furthermore, the specification also states that the expander may be any adjustable device that increases or decreases the separation of the portion.

Response to Arguments

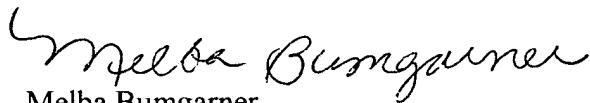
8. Applicant's arguments with respect to the rejected claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melba Bumgarner whose telephone number is 571-272-4709. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached at 571-272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Melba Bumgarner
Primary Examiner